SOME HISTORICAL NOTES ON AIR INTERDICTION IN KOREA

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INTRODUCTION

Air interdiction is defined as the use of air power to "prevent or hinder.... enemy use of an area or route."[1] To accomplish this task the Air Force employs two basic types of missions: preplanned attacks against known fixed targets, and armed reconnaissance. The purpose of the armed-reconnaissance mission is to seek out and destroy "targets of opportunity" along designated routes or within an assigned area. This type of mission, which emphasizes the inherent flexibility of manned aircraft, was used effectively in both World War II and the Korean conflict.

Interdiction missions are directed against two types of targets: lines of communication (LOCs) and the supplies themselves. A bridge is an example of the former, a loaded warehouse an example of the latter. Other typical interdiction targets include railroad trains, tracks, rail and highway bridges, trucks, marshalling yards, troops, and storage facilities.

Air Force doctrine at the time of the Korean War placed interdiction second in its list of priority missions for aircraft.[2] (The requirement for air superiority received first priority.) Since the

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[1]Dictionary of United States Military Terms for Joint Usage, JCS Publication #1, The Joint Chiefs of Staff, Washington D.C., December 1, 1964.

[2]Donald William McMaster, The Evolution of Tactical Airpower - With Particular Emphasis Upon Its Application by the U.S. Navy and U.S. Marine Corps in the Korean War, June 1950 - July 1953, Master's Thesis, University of Maryland, 1959, pp. 45, 59-60.

United Nations enjoyed essentially complete air superiority throughout the Korean War,[3] the Air Force was able to devote almost half[4] of its combat sorties to an intensive interdiction campaign.

As a consequence of the priority accorded it, the interdiction work resulted in considerable damage being inflicted upon the enemys' logistics systems: From 26 June 1950 through 27 July 1953, the USAF flew 220,168 interdiction and armed-reconnaissance sorties and claimed to have destroyed 827 bridges, 116,839 buildings, 869 locomotives, 14,906 railroad cars, and 74,589 "vehicles."[5] The damage to supplies and equipment was extensive--but it was not enough. Published opinions on the success of the Korean interdiction campaign range from "a failure."[6] to "a major factor in persuading the Communists to sign an Armistice,"[7] but the concensus seems to be that the program was, at best, a limited success.

The purpose of this paper is to examine some significant features of the Korean interdiction campaign, to look at the principal reasons for the limited success of this campaign, and to suggest ways in which future campaigns might be improved vis a vis the Korean performance.

The several similarities between the interdiction program in Korea and the current effort in Vietnam tend to indicate that at least some of the experience gained in Korea may be applicable. In Vietnam, as in Korea, the Air Force is directing a good deal of its effort toward the interdiction mission. Also, in both cases the American forces confronted an enemy with (by American standards) extremely low supply requirements, and a relatively simple logistics system with considerable flexibility. Perhaps the most important similarity, however, is the fact that we are again engaged in a battle in which the enemy is

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[3]Futrell, Robert F., The United States Air Force in Korea 1950 - 1953, Duell, Sloan, and Pearce, New York, 1961, p. 647.

[4]USAF Tactical Operations, World War II a.. Korean War, USAF Historical Division Liaison Office, May 1962, p. 162.

[5]Ibid., p. 164

[6]Malcolm W. Cagle and Frank A. Manson, The Sea War in Korea, United States Naval Institute, Annapolis, Maryland, 1957, p. 270.

[7]USAF Tactical Operations, p. 158.

usually given the option of fighting only when he desires it, which enables him to use or conserve supplies in accordance with his supply status and desires.

THE ENEMY SUPPLY SYSTEM

One essential feature affecting the interdiction of the supply system used by the enemy in Korea was the almost unbelievably low requirements of North Korean People's Army (NKPA) and Chinese Communist Forces (CCF) troops. A Chinese Communist or North Korean division of 10,000 men required only 48 tons of supplies per day, allowing for "some" stockpiling and losses from enemy action and spoilage.[8] This may be compared with the 500 tons per day needed to support a 16,000-man U.S. division.[9] On a per-man basis, the U.S. forces required about six times more supplies than did the enemy.

The Communist requirements were kept low by several policies, including the requirement that organizations unable to obtain food via the normal channels obtain it from the local farmers. To this end, as each unit entered Korea it was issued "rice notes" which could be exchanged for food.[10] The local farmer who received these "rice notes" could trade them for money at the nearest CCF supply section or he could use them as tax credits with the North Korean Government.

Another tactic successfully employed by the Communists to keep their requirements to a bare minimum was their policy of using captured weapons, equipment, and food to the maximum extent possible. According to one reference, "It is a CCF policy that all captured material be turned against the enemy whenever possible. Equipment and armament which cannot be directly employed against the enemy (because of the technical details of operation or lack of ammunition and petroleum) will be dispatched to a higher level for use or transport to Manchuria for study."[11] These, then, were the requirements. What of the distribution system?

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[8] Supply and Transport, CCF-NKPA, Joint Study prepared by G-2 8th Army and A-2 5th AF, 23 September 1951, p. iv.

[9] Ibid., p. iv.

[10] Ibid., p. 28

[11] Ibid., p. 43.

The most notable feature of the supply distribution system was its flexibility: "By far the most outstanding feature of the enemy logistical achievement has been the ability to shift and reorganize supply and transportation units according to immediate needs and the dictates of the military situation."[12] Although naturally preferring the more efficient trains and trucks, the Communists used every available means of transportation to get supplies to the front lines. Some of the alternate, or supplementary, transportation schemes included[13,14] wood poles carried balanced on the shoulder with about an 80-lb load, men with A-frames carrying about 65 to 80 lb apiece, horse-drawn wagons with about a 2700-lb load, oxcarts with a 2000-lb load, and pack animals carrying 130 to 200 lb.

Due to the effectiveness of UN air interdiction, almost all enemy movement was at night. Trains and trucks as well as people traveled by night and hid during the day. Typically, troop movement would start as soon as darkness fell and would stop around 2 or 3 o'clock in the morning[15] in order to allow the convoy to get off the road and prepare camp before dawn. Campsites were carefully selected to minimize vulnerability to detection and attack from the air. They were usually about a mile and a half off the road and were used repeatedly by various units on their way to the front.

Against this primitive but effective logistics system, the United Nations employed a modern air force consisting mainly of the Far East Air Forces (FEAF) of the U.S. Air Force.

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[12] Ibid., p. 1

[13] Ibid., p. 91

[14] William A. Gunn, A Study of the Effectiveness of Air Support Operations in Korea, The Johns Hopkins University Operations Research Office, 26 September 1951, Appendix A, p. 3.

[15] Ibid., p. 4.

U.S. AIRCRAFT AND OPERATIONS

On 31 May 1950, one month before the start of the Korean War, FEAF had four types of aircraft that were more-or-less suited to interdiction missions.[16] These were the B-26 Intruder, B-29 Superfortress, F-80 Shooting Star, and F-82 Twin Mustang. Soon after the war started, it became clear that the limited range and payload of the jet-powered F-80 made it unsuitable for operations against Korean targets while based in Japan. The F-51 Mustang, on the other hand, was exceptionally well suited to the long-range, low-level missions required. Further, the Air Force had a considerable backlog of F-51s: 764 in Air National Guard units and 794 in storage.[17] Accordingly, in July 1950, FEAF agreed to convert six F-80 squadrons back to F-51 aircraft.

These F-51s remained operational until January 1953. The F-82s were removed from combat status in February 1952. In December 1950 the Republic F-84 Thunderjet, a jet fighter-bomber designed specifically for the ground-attack role, began operations with FEAF.[18]

Using these aircraft, FEAF attacked various types of targets with varying degrees of emphasis throughout the war. The amount of the total effort that was directed toward interdiction, as opposed to close support, varied from time to time, depending upon the urgency of the front-line situation. During the first few months of the war, when the Eighth Army was almost overrun at Pusan, the majority of the missions were directed toward close support.[19] Later on, after the Inchon landings, the majority of the sorties were devoted to interdiction. Overall, interdiction and armed reconnaissance accounted for 47.7 percent of the combat sorties flown by FEAF in the Korean War.[20] The rest were devoted to counterair, close-support, reconnaissance, and strategic missions.

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[16] Futrell, p. 56.

[17] Ibid., p. 66.

[18] USAF Tactical Operations, p. 159.

[19] McMaster, The Evolution of Tactical Airpower, pp. 105-106

[20] USAF Tactical Operations, p. 162.

For purposes of discussion, we will divide the interdiction campaign into two parts: general and special-purpose. The general interdiction campaign consisted of the normal day-to-day operations, principally daylight armed reconnaissance and night intruder work. The special-purpose interdiction campaigns (for example, "Strangle" and "Saturate") were those of relatively shorter duration against more-or-less specific objectives.

General-Purpose Interdiction

A particularly effective armed-reconnaissance technique was employed by the Fifth Air Force to hunt trucks in hiding during daylight.[21] The same crews were used continually to patrol given sectors daily so that they would be able to detect small day-by-day changes that might go unnoticed by someone less familiar with the area. The pilots on these missions were briefed each morning on the locations of all vehicles sighted the previous night by night-intruder and reconnaissance crews. Given this information as a starting point, the crews proceeded to their assigned areas and searched them in two-plane elements with the leader flying 100 to 300 ft above the terrain while his wingman flew cover at about 1000 ft. The technique was considered an outstanding success until the enemy increased the flak coverage. This forced the reconnaissance crews to fly higher and resulted in decreased effectiveness.

The night-intruder operations were forced on the Air Force by the success of daylight interdiction. When the enemy found that he could no longer travel by day, he began to travel at night and hide during the day.

To attack the enemy at night the Air Force used four basic types of night-intruder missions: road reconnaissance, rail reconnaissace, road block, and bomber stream.

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[21] Futrell, pp. 304-306.

Road and rail reconnaissance were similar in that aircraft searched along assigned roads or tracks looking for a target. The conditions favoring successful spotting were quite different for the two missions, however. Trains were most readily located during moonlight nights, while trucks were more frequently found during periods of total darkness. The reason for this was that the trains, traveling on rails, did not require lights at any time and were thus visible only during moonlight; the trucks, on the other hand, were most frequently spotted during dark nights, when they were required to use lights.

The road-block tactic consisted of cratering a critical section in a heavily traveled road, waiting for traffic to pile up, sowing the area with bombs of various delays, and then attacking the stalled trucks themselves.

The bomber stream was found to be effective against towns and supply areas or troop concentrations. It consisted of sending a pathfinder aircraft to a suspected campsite, or other target, about 30 min ahead of the main force, which gave him time to locate the target and start fires in the area with incendiary bombs. After making sure that the target was well marked, the pathfinder would climb to an altitude slightly above that of the other bombers and direct them, one at a time, to the desired drop zone with respect to the fires on the ground. Bomber-stream operations were typically conducted at an altitude of 4000 ft in order to stay above most ground fire.

Two tactics found to be of some use against known, fixed targets were Shoran and MPQ-2 radar bombing.

Shoran (Short Range Navigation) required good maps, good equipment, and highly skilled operators. Given these, bombings with Shoran could be effective. Shoran bombing was practiced in Korea by B-26s and B-29s, and although the initial results were generally poor due to lack of both equipment and trained personnel, operations later on in the war were rather effective.

Radar drops using MPQ-2 equipment were somewhat similar to ground-controlled approaches (GCAs). The aircraft's position was plotted on a radar scope that had a map superimposed on it, and a ground controller directed the aircraft to the target and told him when to drop his bombs. This technique was frequently used successfully in close-support operations.[22]

Other techniques[23] tried by the night intruders included the use of C-47s loaded with flares to locate and illuminate targets, searchlights[24] externally mounted on B-26s to help them locate and destroy targets, and attempts to create road blocks by dropping nails and other tire-puncturing devices on the road.

Special-Purpose Interdiction

The most widely publicized of the special-purpose campaigns was Operation Strangle.[25,26] The object of this operation was to stop all highway traffic from the railheads near the 39th parallel to the front lines. A one-degree strip of latitude, from 38°15'N to 39°15'N, was selected and the seven major highway routes crossing this strip were assigned to various forces who were to destroy every truck and bridge along these routes. Beginning in late May 1951, concurrent with the Eighth Army's attack northward, the operation initially appeared successful. By mid-June, however, the Eighth Army slackened their pressure on the retreating CCF and the effectiveness of Operation Strangle began to decrease rapidly. The operation, continued through July, was generally assessed as a failure, principally due to the halt in the Eighth Army's advance and the Chinese ability to repair road cuts quickly.

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[22] Lt. Gen. Edward M. Almond, Conference on United Nations Military Operations in Korea 29 June 1950 - 31 December 1951, Army War College, Carlisle Barracks, Pennsylvania, p. 37.

[23] Futrell, pp. 299-300.

[24] Ibid., pp. 421-422.

[25] Ibid., pp. 296-297.

[26] McMaster, pp. 165-166.

Searching for a way to increase the effectiveness of interdiction, Fifth Air Force planners analyzed the Communist supply system and concluded that the key to its success was the railroad system.[27] They considered three possible ways of attacking this system: direct attacks on the railroad cars, attacks on bridges, and attacks on the rails. The first method was rejected on the basis that the Chinese had a large supply of railroad cars and could absorb large losses before they would be hurt by this type of attack. The second method, bridge-busting, was rejected in view of the Navy's lack of success with it during an earlier campaign and also because of the rather obvious countermeasure: the enemy could deploy sufficient antiaircraft guns at railroad bridges to make such attacks too costly. Rail-cutting, on the other hand, is more difficult to countermeasure, in that miles of track would have to be protected, rather than just a few selected points. The rails were also somewhat easier targets than bridges.

Accordingly, on 18 August 1951, the Fifth Air Force, the FEAF Bomber Command, and the Navy began an interdiction campaign against the enemy's railroads that was expected to last for about 90 days and "destroy the enemy's rail system to where its rail traffic was as near zero as we could make it."[28] The campaign was called Operation Strangle, the same code name that had been used previously in the abortive highway-interdiction effort. Like its predecessor, the rail-interdiction part of Operation Strangle looked fairly successful at first. Soon after the start of the operation, the Communists had to use many more trucks than before in order to make up for the decreased rail traffic. Later they cannibalized some of their lesser-used rail lines to get rails for their critical routes. The Chinese, however, began to develop countermeasures. In the extreme northern part of the target system, MIGs started threatening the fighter bombers, which soon forced the abandonment of attacks on that part of the railroad. South of the MIG activity, automatic weapons were emplaced along stretches of track. The fire from these weapons was so intense that it forced the attacking aircraft to abandon their highly effective glide attacks and substitute less accurate, but also less vulnerable, dive-bomb attacks.

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[27] Futrell, pp. 403-413.

[28] Ibid., p. 407.

It was necessary to carry rockets and proximity-fuzed bombs to neutralize the flak; thus the bomb loads were reduced. In conjunction with the rail-busting activity of the fighter-bombers, Bomber Command participated in the rail-interdiction program by bombing a few key rail bridges in order to slow the supply of replacement rails and equipment. Initially, they were able to devote a good deal of attention to this task and were having some success. Later, though, a number of sorties had to be diverted from the bridges to destroy several airfields the Communists were building in North Korea. This resulted in supplies and equipment being forwarded to the repair crews more quickly. The decreased accuracy and decreased bombloads of the fighter-bomber attacks, coupled with the huge amount of effort the Communists were expending on fixing the broken rails, resulted in a decline in the effectiveness of Operation Strangle. On 23 December 1951, the Air Force announced that the Chicoms "have broken our railroad blockade of Pyongyang and...won...the use of all key rail arteries."[29] Thus ended Operation Strangle. Air Force studies[30] attributed the failure of Strangle to the following: (1) the cuts that had been made in the tracks were not attacked continually, particularly during darkness and/or bad weather, (2) because the attacks were scattered, they resulted in a number of small cuts which the Chicoms could repair in remarkably short time, and (3) the scattered attacks made it necessary for each flight to go out with some antiflak loading, thereby decreasing the bombload that could be carried.

Considering these deficiencies, the Air Force planned that in their next interdiction effort[31] targets were to be attacked continually (during the day by fighter-bombers and at night by B-26s) and the attacks were to be concentrated along relatively short stretches of railroad track. This operation, called Saturate, began on 3 March 1952. Like the previous interdiction campaigns, Operation Saturate looked good at first and then became less effective as the enemy developed countermeasures. In this case the countermeasure was quite

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[29] Futrell, p. 413.

[30] Ibid., pp. 415-416.

[31] Ibid., pp. 416-418.

direct: The Communists placed antiaircraft guns along nearly all of their rail lines. Thus, by the end of April 1952, Operation Saturate, which had barely begun, was obviously declining in usefulness.

And so it went. The Air Force interdiction programs in Korea all seemed to follow the same cycle: initial success and then defeat by enemy countermeasures.

ENEMY COUNTERMEASURES

The enemy's success in overcoming massive attempts at interdiction by U.N. forces was little short of fantastic. According to Brig. Gen. Darr H. Alkire, FEAF deputy for materiel, "It has frequently been stated by commanders in Korea that the one man they would all like to meet when the war is over is the G-4 of the Communist forces. How he has kept supplies moving in the face of all the obstacles is a real mystery."[32] The mystery has since been resolved, and there is essentially unanimous agreement that one of the most important reasons for the Chicom success was their ability to devise effective countermeasures for various types of attack. According to one source, it was the flexibility of their supply system that defeated interdiction.

When air power forced them off the roads and rails during the day, they traveled by night. They built multiple parallel bridges to decrease the effectiveness of bridge-busting; the usual number of bypasses was four or five, but for one key bridge, they built no less than eight bypasses.[33] They built "underwater bridges" to escape detection from the air. They built bypasses around critical points in the supply routes. They used removable bridge spans to prevent reconnaissance flights from detecting repaired bridges.[34] They broke truck convoys up into small units (4 or 5 trucks) to avoid detection. They sometimes assigned drivers to given areas to maximize their knowledge of the road and their ability to drive that area at night. They used shuttle trains on very short stretches of track to carry supplies between break points; the supplies were then moved by truck, oxcart, or coolie to a waiting train and hauled to the next obstacle.

All of these techniques contributed to the enemy's success in neutralizing the impact of interdiction, but the single most effective

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[32] Ibid., p. 308.

[33] Ibid., p. 294.

[34] Ibid., p. 411.

technique, and the one that is generally credited with keeping the Chicom supplies moving, was their ability to repair bomb damage in minimum time.[35]

Some key bridges were repaired overnight, while others required from 24 hr to four days. The average was two days. This fast repair was accomplished with essentially unlimited manpower and stockpiled supplies near many of the bridges.

The roads were kept open by units of the Highway Administration Bureau,[36] which was placed under the control of the North Korean Ministry of National Defense as a result of UN attacks on the roads, bridges, and railroad installations of the Communist supply system. The bureau was broken into battalions and each battalion was assigned an area. It was their dual responsibility within this area to control traffic and to maintain the roads in operable condition. Platoons of the road-repair battalions were stationed 2.5 to 3 km apart along important routes. The road maintenance was accomplished without heavy equipment of any kind. The principal tools were shovels, picks, axes, and wire-cutters. The efficiency of this technique is attested to by the fact that POW reports indicated that roads were typically cleared overnight.

The railroads were kept open in a similar fashion.[37] Fifty-man repair crews were maintained at major rail stations, and ten-man crews were stationed every 4 mi along the tracks. Using this technique, the Communists were able to repair ordinary rail cuts in 2 to 6 hr and "maximum-effort" rail cuts in 4 to 7 days. A key element in the effectiveness of these repair crews was their authority to draft North Korean civilians as needed to help repair the damage and/or carry goods from one train to another.

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[35] Supply and Transport, p. 88.

[36] Ibid., pp. 49-51, p. 89.

[37] Futrell, p. 437.

AN EVALUATION

Air interdiction during the Korean War succeeded in some respects. It forced the enemy to move essentially all his men and supplies at night. Extensive railway interdiction forced him to use slower, less efficient trucks to a great extent. Interdiction reduced the flow of supplies to the front lines, but it did not stop them. The reasons for this limited success have been extensively analyzed by numerous researchers. Several of their findings are discussed below.

Lack of a Night Capability

The lack of a nighttime interdiction capability was considered critical by several analysts. Basically, the problem was that early interdiction efforts (during daylight) had been so successful that transportation, except via man using an A-frame, operated rarely by day. This resulted in a supply system that FEAF could not adequately attack (nor could anyone else, for that matter). The targets were extremely difficult to locate and attack, and even when they could be attacked, bomb-damage assessment was almost impossible. The Air Force made extensive efforts to improve their night capability but never did achieve the desired level of effectiveness. They quickly found out that the tactical fighters were ineffective at night:[38] The F-51s could locate targets, but they were blinded by their own rocket and gun fire; the F-80s could not strafe effectively at jet speeds.

One interesting project that met with some success was the Redbird, a B-26 equipped with infrared equipment. Field tests showed that Redbird aircraft had significantly better night capability than the conventional B-26s, particularly in sparsely traveled areas where conventional detection techniques (i.e., the human eye) were unable to produce results.

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[38] Futrell, p. 127.

Various additional tactics, including flare-drops and airborne searchlights, were experimented with, but the overall result was a severely limited night capability against an enemy who traveled mostly at night.

Enemy Countermeasures

The enemy's countermeasures are considered by some to be the principal reason for the limited success of interdiction in Korea. Several of these countermeasures have been described above, the one that is generally credited with doing the most damage to our interdiction effort being the CCF and NKPA capability for quick repair. This was made possible, of course, by the use of almost unlimited manpower. The Communists were able to repair key bridges in an average of 2 days, while in Europe such bridges required several weeks and were sometimes never repaired. In Korea, 10 hr was a typical repair time for a rail cut; a comparable World War II figure is 1 day.

Delay-Fuzed and Antidisturbance Weapons

After making a rail or road cut or dropping a bridge span, the Air Force typically left the area while the enemy made the necessary repairs. It has been observed that sowing the area with delay and antidisturbance weapons would probably have increased repair times, which were so crucial to the enemy's success against interdiction.

Sanctuary

Sanctuary was not considered a determining factor, but nevertheless it did hurt the U.N. effort. In World War II, when the enemy was forced to travel at night it was possible to attack the source of his supplies. This was not so in Korea.

Stalemated War

Another factor that is credited by some as being critical is the stalemate which lasted for two years during the truce talks. To be

effective, interdiction must be carried out against an enemy who is using his supplies at a high rate, i.e., an enemy continually fighting. In Korea, the enemy was allowed, in most cases, to initiate or break off contact at his option, so he could fight when he had supplies and rest when his supplies were low. Under conditions such as this, it would be virtually impossible to successfully interdict, i.e., to isolate the battlefield to the extent that the enemy is incapable of sustained offensive action.

Other reasons for the failure of interdiction cited by various sources include failure to maintain a consistent objective (targets and attack philosophies were frequently changed), failure to use reconnaissance as effectively as possible, and, finally, failure to use nuclear weapons.

APPLICATION TO VIETNAM

In attempting to apply the Korean experience to other conflicts, such as that in Vietnam, one should be careful to judge whether or not the shortcomings mentioned above could be overcome in the application being considered. For instance, in Korea attacks could have been initiated and pressed more or less at will, which would have forced the enemy to use up his supplies. This would not have been difficult, because the U.N. forces had a front line and thus a fairly good idea of the enemy's location. Such is not the case in Vietnam. The problem there is locating the enemy. Thus, one of the many reasons for the failure of interdiction in Korea confronts us in Vietnam: The initiative to make or break contact usually lies with the enemy.

The supply system in Vietnam is apparently even more difficult to interdict than the Korean system. It seems to rely even more upon coolies for transporting supplies, the dense jungle cover compounds the problem of locating trails and traffic, and the frequent cloudiness hampers low-altitude aircraft activity. The relatively low rate of use of the supply trails makes it difficult, if not impossible, to make interdiction effective. This low use rate is an essential feature of the Vietnamese conflict and occurs primarily because much of the supplies for Viet Cong and North Vietnamese soldiers (particularly food) come from South Vietnamese sources thus making extensive overland supply unnecessary.

The existence of sanctuaries is still, for good or bad, part of the picture, as is the nonuse of nuclear weapons. And, of course, the now-familiar political constraints continue to limit targets and tactics.

Each of the above-mentioned factors tends to complicate the interdiction problem, and their cumulative effect is quite pronounced, but this brief review of the Korean experience suggests that even within these limitations the effectiveness of air interdiction could be dramatically improved with the acquisition of a night-attack capability.

The lack of a night-attack capability is the single most important restriction upon the effectiveness of air interdiction today. The

Korean experience conclusively demonstrated that stopping the enemy by day is not sufficient to stop his supplies. The Air Force can, of course, bomb at night and, to some degree, locate targets, but the requirement for success in the interdiction role is the ability to locate and attack small, fleeting targets. A great deal of research is being done in this area, which can be expected to produce some very useful results.

As a further step in improving the effectiveness of air interdiction it would seem worthwhile to conduct an in-depth review of specific interdiction efforts in World War II and Korea. Many of the lessons being learned today in Vietnam have no doubt been learned before in other theaters against different opponents. The Air Force has been involved in numerous interdiction campaigns--some successful (e.g., Normandy and Burma) and some not so successful (e.g., Korea). These campaigns covered a broad spectrum of weapons, targeting philosophies, and operational conditions, and, most important, the results of these efforts, insofar as one may ever assess the results of interdiction, are now known. Detailed accounts are readily available. A review of these accounts with the object of discovering "common denominators" of successful (and unsuccessful) interdiction efforts would certainly be illuminating and might be very rewarding.

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